REMARKS

The paragraph beginning at page 6 line 20 is rewritten to more clearly describe the difference between conventional heating methods for reducing catalysts and the present invention. The original language included an inadvertent translation error. The new paragraph corrects the error.

Claims 1, 5 and 6 are amended. Claims 2-3 are cancelled and replaced by new claims 7-8.

The replacement paragraph and amended claims are supported by the application as originally filed, and no new matter is added.

The Office Action indicates several objections with respect to the grammar or syntax of claims. Applicants respectfully submit that the amendments to the claims correct the matters of concern and request that the objections be withdrawn.

Claims 3-4 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants traverse the rejection to the extent that it can be maintained.

Claims 3-4 are cancelled and replaced by new claims 7-8. Applicants respectfully request that the rejection be withdrawn.

Claims 1-6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Clarkson et al. (US 6919,290) taken together with Voecks (US Pub. No. 2004/0206618 A1). Applicants traverse the rejection to the extent that it can be maintained.

Applicants claim methods of reducing catalysts containing a metal compound using a hydrogen-containing gas under a non-thermal plasma state. Conventional reduction methods use thermal heating to provide high temperatures (page 2 lines 5-7). The claimed methods eliminate the need for devices to provide high temperatures, and also provide catalysts without loss of efficiency, and even improved efficiency in some cases, in a hydrocarbon conversion process (tables 1 and 2).

Clarkson et al. disclose a conventional thermal method for activating a catalyst with hydrogen. As Clarkson et al. explain, their object is to provide an effective activation procedure for Fisher-Tropsch catalysts under conditions within the normal operating parameters for a Fisher-Tropsch reaction (column 2 line 8). As acknowledged in the Office Action, Clarkson et al. do not disclose the use of non-thermal plasma.

Voecks is cited for disclosing the use of non-thermal plasma technique to enhance a catalytic reaction process. As a preliminary matter, Voecks is not available as a reference as the publication date for the Voecks application is October 10, 2004 that is nearly eleven months after the filing date of December 29, 2003 for the present application.

Voecks discloses a method to reduce the carbon monoxide level in a reformate stream of a hydrocarbon fuel to prevent fouling of a fuel cell stack (page 2 paragraph [0015]). The reformate stream passes through a watergas shift (WGS) reactor wherein carbon monoxide is oxidized to carbon dioxide (page 1 paragraphs [0004] and [0005]). A non-thermal plasma is provided to improve the efficiency of a catalyst in the WGS reactor. Clearly, the process of Voecks relates to an improvement in the performance of a fuel cell system, and not to a method for reducing catalysts. Voecks discloses the simultaneous use of non-thermal plasma with a catalyst to enhance the conversion rate of an oxidation reaction. There is no teaching or suggestion by Voecks that the conditions for oxidizing carbon monoxide in a reformate stream would be effective for reducing catalyst is the presence of hydrogen-containing gas. Applicants respectfully submit that the combined teachings of Clarkson et al. with Voecks fail to disclose the Applicants' invention as claimed, and request that the rejection be withdrawn.

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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10 November 2006
Date

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